COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

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IN REPLY PLEASE
REFER TO FILE: W-0
A1146

July 6, 2004

TO: Each Supervisor

FROM: James A. Noyes
Director of Public Works

LOS ANGELES COUNTY WATERWORKS DISTRICT NO. 40, ANTELOPE VALLEY TOTAL TRIHALOMETHANE DRINKING WATER STANDARDS VIOLATION AND FUTURE SOLUTIONS
BOARD MOTION OF JUNE 22, 2004, SYNOPSIS 33B

In response to the attached motion by Supervisor Michael D. Antonovich, the following is a report on the exceeded maximum contaminant level (MCL) of trihalomethanes (TTHMs) in the drinking water served by Los Angeles County Waterworks District No. 40, Antelope Valley (District), to the Lake Los Angeles residents.

Background

Chlorine is the most widely used chemical compound for the disinfection of drinking water. It kills potentially harmful microorganisms and prevents the deterioration of water quality in pipelines. However, when it is added to treated imported surface water, chlorine reacts with organic materials from decaying plants and animals, and salt, in the form of bromide, that are dissolved in the water to form disinfection byproducts (DBPs) such as total TTHMs. TTHMs in drinking water, according to the Federal Environmental Protection Agency and the State Department of Health Services, poses a health risk to the public at concentration above the MCL of 80 parts per billion (ppb).

In January 2002, a federal regulation lowered the MCL for TTHMs from 100 ppb to 80 ppb, and required all water systems to monitor their pipeline networks for TTHMs starting in January 2004. Prior to January 2004, only water systems that serve more than 10,000 people were required to monitor for TTHMs.

Extent of TTHMs' Levels in the District

Recent TTHM water quality test results from the Lake Los Angeles system, one of five water systems in the District, exceeded the Federal Environmental Protection Agency MCL for TTHMs. Although there was no immediate threat to the health and safety of the public, a public notification of the incident was sent out to each customer on June 17, 2004, as required by the Safe Drinking Water Act regulations. Two additional water systems, the Lancaster/Desert View Highlands system and the Pearblossom/Littlerock/Sun Village system, are at potential risk of noncompliance. Compliance with TTHMs' MCL is determined by averaging TTHMs' results from several locations within a water system over four quarters.

Measures Implemented to Ensure Compliance with TTHMs' Standard

A substantial portion of the District's water supply is surface water purchased from the Antelope Valley-East Kern Water Agency (AVEK). AVEK obtains its surface water from the State Water Project via the California Aqueduct and disinfects it using chlorine prior to supplying it to the District. The surface water treated by AVEK contains high levels of organic matter and bromide (mostly from seawater intrusion in the delta) that react with chlorine to form TTHMs. Groundwater from local wells is relatively free of organic matter and salt. Therefore, it does not form TTHMs when chlorine is added.

To reduce the TTHM levels in its treated water, AVEK hired MWH, an engineering firm that specializes in drinking water treatment, to determine an effective treatment for the removal of the organic matter from surface water prior to the addition of chlorine. A pilot study at AVEK's Quartz Hill water treatment plant began on May 8, 2004, and will be completed by August 2, 2004. A modification of AVEK's treatment plant to include the recommended treatment is planned to follow the study. AVEK informed us in a February 13, 2004, letter that its goal is to reduce TTHMs in its delivered treated water to approximately 40 ppb (see attached). Meanwhile, we are maximizing the amount of groundwater use from the District's wells, which effectively reduces the TTHM levels in AVEK water through blending.

TJK:nm
A1146

Attach.

cc: Chief Administrative Office
Executive Office

A
WoSM

AGN. NO._____

MOTION BY SUPERVISOR MICHAEL D. ANTONOVICH JUNE 22, 2004

Recent testing by the Department of Public Works discovered that drinking water in the County's Waterworks District 40, Region 38 (Lake Los Angeles), has exceeded the Maximum Contaminant Level for total trihalomethanes (TTHM). In addition to public notification by the Department, residents of Lake Los Angeles served by Waterworks District 40 must be fully informed as to the efforts of the Department to mitigate this problem.

I, THEREFORE, MOVE that the Board of Supervisors direct the Director of Public Works to:

1. Conduct a full investigation into the nature and extent of the TTHM contamination of drinking water in Waterworks District 40;

2. Identify what measures are to be implemented to insure the safety of the drinking water for residents in Waterworks District 40; and

3. Report back to the Board of Supervisors with its findings in 30 days.

# # #

MDA:pno
waterworks40drinkingwater

MOTION

MOLINA _____

BURKE _____

YAROSLAVSKY _____

ANTONOVICH _____

KNABE _____

ANTELOPE VALLEY-EAST KERN WATER AGENCY
AVEK
ESTABLISHED 1959

A PUBLIC AGENCY

February 13, 2004

Manuel Del Real
Assistant Deputy Director
Los Angeles County Department of Public Works
Waterworks and Sewer Maintenance Division
900 South Fremont Avenue
Alhambra, CA 91803-1331

Re: **ANTELOPE VALLEY-EAST KERN WATER AGENCY'S PROPOSED APPROACH FOR TRIHALOMETHANE REDUCTION**

Dear Mr. Del Real:

As requested, this letter is to inform you that the Antelope Valley-East Kern Water Agency (AVEK) is finalizing the evaluation of treatment methods to reduce the total trihalomethanes (THMs) in the Agency's treated State Project water. The Agency's goal is to reduce the THMs in its delivered treated water to approximately 40 parts per billion.

Treatment methods that are being considered include the use of chloramines as a disinfectant and /or removal of organic material using granular activated carbon (GAC). The selected method would result in treated water that has considerably less THMs than the current levels.

We hope this letter will assist you in obtaining your waiver or permit for the Los Angeles County Waterworks District No. 40 Antelope Valley Aquifer Storage and Recovery project. If I could be of any further assistance, please feel free to contact me at (661) 943-3201.

Sincerely,

Russell E. Fuller
General Manager

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